



SIMTEK6241

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of: Tadashi Takano

App. No.: 09/787299

Filed: March 15, 2001

Title: ROTATING ELECTRICAL
MACHINE


Art Unit: 2834

Conf. No: 8159

I hereby certify that this correspondence and all marked
attachments are being deposited with the United States
Postal Service as first class mail in an envelope addressed
to: Assistant Commissioner for Patents, Washington
D.C. 20231 on:

September 18, 2002

Date


Ernest A. Beutler Reg. No. 19901

TRANSMITTAL OF APPEAL BRIEF

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Enclosed herewith are one (1) original and two (2) copies of Appellant's Appeal
Brief. Our check in the amount of \$320.00 to cover the associated fee is also enclosed.

If, for some reason, Appellant has not paid the sufficient fee, please charge our Deposit
Account No. 50-1164 for any such fee or credit our account for any overpayment. A duplicate
copy of this letter is enclosed for such purposes.

Respectfully submitted,



Ernest A. Beutler
Registration No: 19901
500 Newport Center Drive
Suite 945
Newport Beach, Ca 92660
(949) 717-4821 Pacific Time

RECEIVED
SEP 30 2002
TECHNOLOGY CENTER 2800



SIMTEK6241

PATENT

#111/ Appeal Brief
10/4/02
RECEIVED
TECHNOLOGY CENTER 2800
OCT 30 2002

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appellants: Tadashi Takano
App. No.: 09/787299
Filed: March 15, 2001
Title: ROTATING ELECTRICAL
MACHINE
Art Unit: 2834
Conf. No: 8159

APPEAL BRIEF

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

RELATES APPEALS AND INTERFERENCES

There are no other appeals or interferences, the outcome of which would have a bearing on this appeal or which would be affected by the decision in this appeal.

REAL PARTY IN INTEREST

In addition to the inventor, the real party in interest is his assignee, Kabushiki Kaisha Moric.

STATUS OF CLAIMS

Claims 1 through 6, the only claims in this application are all on appeal before the Board. A clean copy of these claims appears in the Appendix.

STATUS OF AMENDMENTS

No amendment has been filed subsequent to the Final Rejection and hence, the claims before the Board are the claims as finally rejected.

09/25/2002 AWONDAF1 00000043 09787299

01 FC:120

320.00 0P

F6241 Appeal Brief

App. No.: 09/787299
Filed: March 15, 2001

RECEIVED
SEP 30 2002
TECHNOLOGY CENTER 2800
Page 1 of 6

ISSUES BEFORE THE BOARD

The issues before the Board are:

1. Whether the subject matter of Claims 1 and 4 through 6 are anticipated under 35 U.S.C. 102(b) on Grundl et al 5723933 and
2. Whether the subject matter of Claim 2 is obvious under 35 U.S.C. 103(b) on Grundl et al in combination with Tolmie Jr. 4988905 and
3. Whether the subject matter of Claim 3 is obvious under 35 U.S.C. 103(a) on the combination of Grundl et al in view of Kim 5866962.

GROUPING OF THE CLAIMS

The only claims which stand or fall together are Claims 1 and 4 and Claims 5 and 6. The patentability of these groupings and the remaining claims will be argued separately.

APPELLANT'S INVENTION

Appellant's invention relates to an improved winding for the magnetic cores of a rotating electrical machine such as a motor or generator.

Specifically the invention relates to the use of a stranded wire winding which is wound around the cores so as to improve the density of the winding. Although this can be accomplished by using a single, very thick wire, such wires are difficult to wind. Where thin diameter plural wires have been wound around the core, the windings become difficult and the resistance values differ through out the thickness of the winding.

Therefore, the inventor has discovered that by using a plurality of stranded cables as the winding, it is possible to easily make the winding, have it be consistent and also to provide good electrical efficiency.

The construction of the embodiment is disclosed in the specification under the heading appearing at Page 5 of the original filing entitled "Best Forms of Embodying the Invention" and carrying through the end of the specification, which makes reference to the accompanying drawings.

APPELLANT'S ARGUMENTS

The rejection of Claims 1 and 4 through 6 is under 35 U.S.C. 102(b). Therefore, in order to determine if this rejection can be sustained, the Board need only consider the claim wording and determine if it literally reads upon the reference. It is submitted that it does not.

The feature which distinguishes Claim 1 over the Grundl et al reference is the fact that Appellant's invention relates to a method of winding a coil upon core tooth elements. The Grundl et al reference, on the other hand, is directed toward a stator which is coreless and which comprises a plurality of rigid wire coils that are embedded in a resinous material to form a rigid structure. The types of machines are quite different even though they may have the same ultimate purpose.

Appellant's invention, as discussed in the "Summary of the Invention" section above, relates to an improved method for winding coils on armature poles wherein the windings are formed by stranded wires to as to permit ease of winding and high flux density. The Grundl et al reference, on the other hand, is employed to form a self-supporting, rigid stator coil that is made of a conductive stranded wire and which is desired to be very rigid and thus, does not have the flexibility to permit winding around a core. Rather, the rigid wires are bent into a coil shape and then are further reinforced by embedding the entire structure in a resin.

Thus, although the structures may look similar and appear similar in retrospect, the purposes and structures of the coils are entirely different. Appellant's desire to provide a relatively flexible winding that can be easily wound around a core while Grundl is looking for a rigid structure and is not at all concerned with how the winding is formed other than it must be rigid and it is not wound around anything.

Therefore, it is most respectfully submitted that the rejection under 35 U.S.C 102(b) must be reversed because the reference lacks the core around which the wires are wound.

Claim 4 stands or falls with Claim 1 as noted above.

Claims 5 and 6 depend upon Claim 1 and further distinguish over the Grundl et al reference in calling for an insulating coating to encircle the enameled wires of the strand and the strands thereof for retaining the stranded wires in position both during and after winding. It may seem like a minor point, but the Grundl et al reference really does not disclose the nature of his stranded wires other than to call for them to be stranded. It appears that these stranded wires are enclosed within a protective covering which appears in FIG. 2 where the lead line from the reference numeral 38 extends. What this material is not known nor is it described. However, the entire assembly then contained within an insulating coating which is the block of material 32 in which the rigid coils are retained.

Contrast this with Appellant's construction shown in detail in FIG. 7 wherein the individual wires are indicated at 15a, their enameled coatings at 15b and the encircling insulating coating being indicated at 15c. This encircles, as Claim 5 clearly calls for, the enameled wires and the strand thereof. Technically, the Grundl et al bonding or plastic material does not encircle the wires but rather encircles an already encased strand of wires. Hence, there is a possibility of slippage, but this is immaterial to Grundl et al because Grundl et al is directed toward an entirely different type of structure. That is, Grundl et al is not concerned with being able to wind his coils around a core but rather to embed the already wound, rigid coils in an insulating material to provide additional rigidity.

Claim 2 is rejected under 35 U.S.C. 103 on the combination of Grundl et al in view of Tolmie. It is not admitted that Grundl et al shows the basic combination called for and although Tolmie shows a brushless encoder assembly, this is in conjunction with an un-illustrated winding arrangement which may or may not be the same as Grundl et al. Further, it should be noted that Grundl et al does not illustrate how the electrical current is delivered to or extracted from their windings and it is submitted that it is mere speculation that this is an arrangement that could be mounted in a housing as shown in Tolmie.

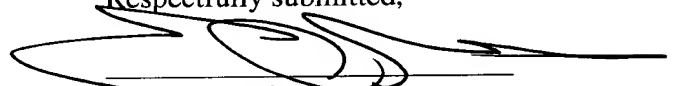
Claim 3 is similar to Claim 2 but calls for the encoder to be positioned inside the housing rather than outside the housing. Therefore, the Examiner has relied upon a different secondary reference, this being Kim. Again, however, it is submitted that it is pure speculation as to whether or not Grundl et al's structure could be utilized in Kim's environment because Grundl et al does not teach anything about how electrical current is transmitted to or from the windings.

App. No.: 09/787299
Filed: March 15, 2001

Page 5 of 6

In view of the foregoing, it is submitted that although Appellant's invention and the prior art may look somewhat similar, they are directed toward totally different structures and, therefore, the claims are not readable upon the basic reference for the reasons noted above and rejections based upon anticipation by Grundl should be reversed. Such action is most courteously solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Ernest A. Beutler', written over a horizontal line.

Ernest A. Beutler
Registration No: 19901
500 Newport Center Drive
Suite 945
Newport Beach, Ca 92660
(949) 717-4821 Pacific Time

APPENDIX

Claims on Appeal

1. A rotary electric apparatus comprising a first element having a permanent magnet, and a second element with magnet wires wound around cores, said first and said second elements being supported for relative rotation, said magnet wires comprising plural enameled wires twisted together to form a stranded cable that is subsequently wound around said cores.
2. A rotary electric apparatus as recited in claim 1, characterized in that; the first and said second elements are placed within a casing, the first element comprises a rotor supported for rotation with said casing, said second element comprising a stator is fixed to said casing, and further comprising an encoder for acquiring control signals is provided on the outside of said casing.
3. A rotary electric apparatus as recited in claim 1, characterized in that; the first and said second elements are placed within a casing, the first element comprises a rotor supported for rotation with the casing, said second element comprising a stator is fixed to said casing, and an encoder for acquiring control signals is provided on the inside of said casing.
4. A rotary electric apparatus as recited in claim 1, further including outlet wires constituted as stranded wires associated with the magnet wires.
5. A rotary electric apparatus as recited in claim 1 further including an insulating coating encircling the enameled wires and the strand thereof for further retaining the stranded wires in position after the winding.
6. A rotary electric apparatus as recited in claim 5 wherein the insulating coating comprises a plastic material.